

REMARKS

Reconsideration of this application in view of the above amendments and following remarks is respectfully requested. Claims 1-24, 33-38 and 48-52 are now pending. Claims 1-3, 8, 9, 15, 21, 22, 33-35, 37 and 48-51 have been amended. Claims 25-32, 39-47 and 53-64 have been canceled as directed to non-elected subject matter.

***Rejection under 35 U.S.C §112, Second Paragraph***

All pending claims stand rejected under the second paragraph of §112 as indefinite for the reasons noted on pages 2-3 of the outstanding Office Action. For purpose of convenience, Applicants will address the Examiner's concerns in the order presented in the Office Action.

In claim 1, step (h), the Examiner is of the opinion that the phrases "the interaction" and "the amount" lack antecedent basis. Applicants have now amended these phrases to refer to "an interaction" and "an amount". Further, the Examiner considers to the term "at least a major part", in step (e), to be unclear. While Applicants do not agree, this phrase as now been amended to recite "at least 75%", support for which may be found in the specification at page 7, line 15-26, as well as claim 2 as originally filed.

The Examiner considers claims 2 and 3 unclear with regard to the percentage of analyte having substantially no cross-reactivity (presumably due to the use of the phrase "preferably"). For purpose of clarity, Applicants have amended claims 2 and 3 to recite that least about 87.5% (claim 2) or at least about 90% (claim 3) of the analytes have substantially no cross-reactivity to other ligands. Support for these amendments may be found in the specification at page 7, lines 15-26, as well as claim 2 as originally filed.

Claims 8 and 9 have been amended by deletion of the word "the" prior to the phrase "possible influence".

Claim 15 has also been amended by deletion of the word "the" prior to the word "capability". Claims 16 and 17 do not contain this phrase, and remain as originally filed.

The Examiner considers the phrase "based on" in claims 21 and 22 to be unclear. For purpose of clarity only, Applicants have amended these claims to recite that "the detection

is” evanescent wave sensing (claim 21) or SPR (claim 22). Support for this amendment may be found in the specification as originally filed at page 8, beginning at line 10.

Claim 33 has been amended in a manner consistent with claim 1; namely, by deletion of the word “the” at several locations, and to recite that at least about 75% the analytes are capable of specifically binding to a respective one of the plurality of ligands. Claims 34 and 35 have been amended in a consistent manner with regard to the percentage of analyte.

Claim 37 has been amended to recite that “the detection is” evanescent wave sensing (as opposed to “based on”).

Claims 48-51 have been amended in a manner consistent with claims 1-3 and 21 as discussed above.

In view of the above amendments and remarks, Applicants submit that the pending claims are sufficiently definite to satisfy the second paragraph requirements of §112, and request that this ground of rejection be withdrawn.

***Rejection under 35 U.S.C §102(b)***

All pending claims stand rejected under §102(b) as anticipated by PCT Publication No. WO 90/05306 to Malmqvist et al. (“the ‘306 PCT”). Applicants respectfully disagree for the following reasons.

The ‘306 PCT does not teach all elements of the pending claims. For example, step (a) recited in independent claim 1, “providing a **plurality of discrete** solid support areas”, is not found in the ‘306 PCT. Instead, this reference only provides one support area or sensor area.

Similarly, step (c) as recited in independent claim 1, “defining a first set of **different groups** of the plurality of ligands” is also not present in the ‘306 PCT. Instead, this reference employs, in case of different ligands, ligands from the same group reacting with the same macromolecule.

Step (d) of independent claim 1, “immobilizing each group of ligands **on a different solid** support area” also cannot be found in the ‘306 PCT. In case two or more ligands are used in this reference, then the second ligand is not immobilized to a sensor surface at all, but

is instead reacted with the macromolecule already bound to the first ligand which is bound to the sensor surface.

In step (c) of independent claim 1, **different analytes** are provided. In the '306 PCT, the same analyte is reacted with different ligands. Furthermore, in step (c) the analytes have substantially **no cross reactivity** to other ligands. In the '306 PCT, the analyte cross-reacts with several ligands (this is also the purpose of the '306 PCT, to determine mutual influence of ligand interaction on a macromolecule) (*see* Abstract of the '306 PCT).

Step (f) of independent claim 1 also relates to different groups of analytes, which the '306 PCT does not disclose.

In step (g) of independent claim 1, the surface areas with immobilized **ligands are sequentially contacted** with analyte. In the '306 PCT, in case two ligands are used, the analyte is sequentially contacted with the ligands. This is a significant difference since the '306 PCT does not have two immobilized ligands on the sensor area, while the present invention has a plurality of ligands immobilized in different groups on the sensor area.

Finally step (h) relates to determining the **binding rate of each analyte to each ligand**. This is simply not done (and not even possible) in the '306 PCT since, in case of two ligands, each ligand influences one and the same analyte.

The distinguishing features discussed above in the context of independent claim 1 are also recited in independent claims 33 and 48 in the same or similar manner. Thus, none of the independent claims are anticipated by the '306 PCT, nor can any of the dependent claims be anticipated since they contain all the limitations of the independent claims from which they depend. Further, the '306 PCT does not suggest or motivate one skilled in this field to modify the teaching of the '306 PCT to arrive at the subject matter currently pending in this application.

Accordingly, Applicants submit that the pending claims are patentable over the '306 PCT and request that this ground of rejection be withdrawn.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

In view of the above amendments and remarks, allowance of claims 1-24, 33-38 and 48-52 is respectfully requested. A good faith effort has been made to place this application in condition for allowance. However, should any further issue require attention prior to allowance, the Examiner is requested to contact the undersigned at (206) 622-4900 to resolve the same.

Respectfully submitted,  
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